

QWIP WITH ELECTRON LAUNCHER FOR REDUCING DIELECTRIC RELAXATION EFFECT IN LOW BACKGROUND CONDITIONS

ABSTRACT OF THE DISCLOSURE

[0043] A QWIP structure is disclosed that includes a graded emitter barrier and can further be configured with a blocked superlattice miniband. The graded emitter barrier effectively operates to launch dark electrons into the active quantum well region, thereby improving responsivity. A graded collector barrier may also be included for reverse bias applications. The configuration operates to eliminate or otherwise reduce image artifacts or persistence associated with dielectric relaxation effect in low-background applications.